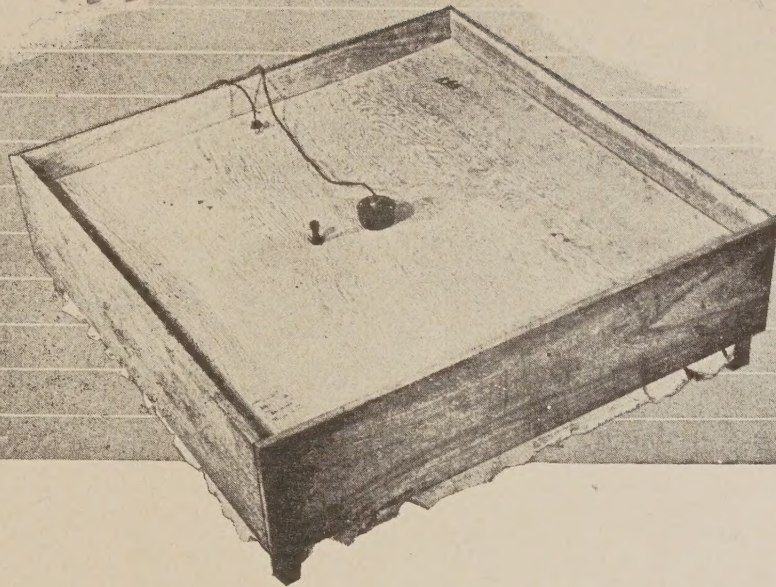


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*for successful chick brooding . . .*

# A HOME-MADE ELECTRIC BROODER

## Questions and Answers on Your Brooder

**Q.** What are the advantages of a lamp-type brooder?

**A.** Lamp brooding is a near approach to natural brooding conditions. Lamps do not heat the entire brooder house. Therefore their use permits a natural zone of cool air away from the brooder. By moving from the heated air under the brooder to this cool zone at will, chicks become adapted at an early age to changing temperatures, and thus become more hardy.

**Q.** What about heating elements and thermostats, as recommended in earlier brooder plans?

**A.** Some thermostats do not operate satisfactorily with incandescent lamps. To prevent trouble and save critical material, thermostats and strip heaters are not used.

**Q.** Some brooders use four lamps. Why only two?

**A.** Fewer lamps reduce the use of critical material, such as wire and fittings, by about 80 per cent.

**Q.** Why can't I use one double-size lamp?

**A.** One lamp may burn out. Two are not likely to fail at the same time.

**Q.** At what temperature should I keep the brooder?

**A.** Your county agent can advise you on temperatures needed for the various ages of chicks. Lamps should be replaced by smaller ones if temperature is too high.

## Make Your Own...

**An electric brooder saves time and labor.**

**Saves more chicks by reliable heat control, thus preventing feed loss.**

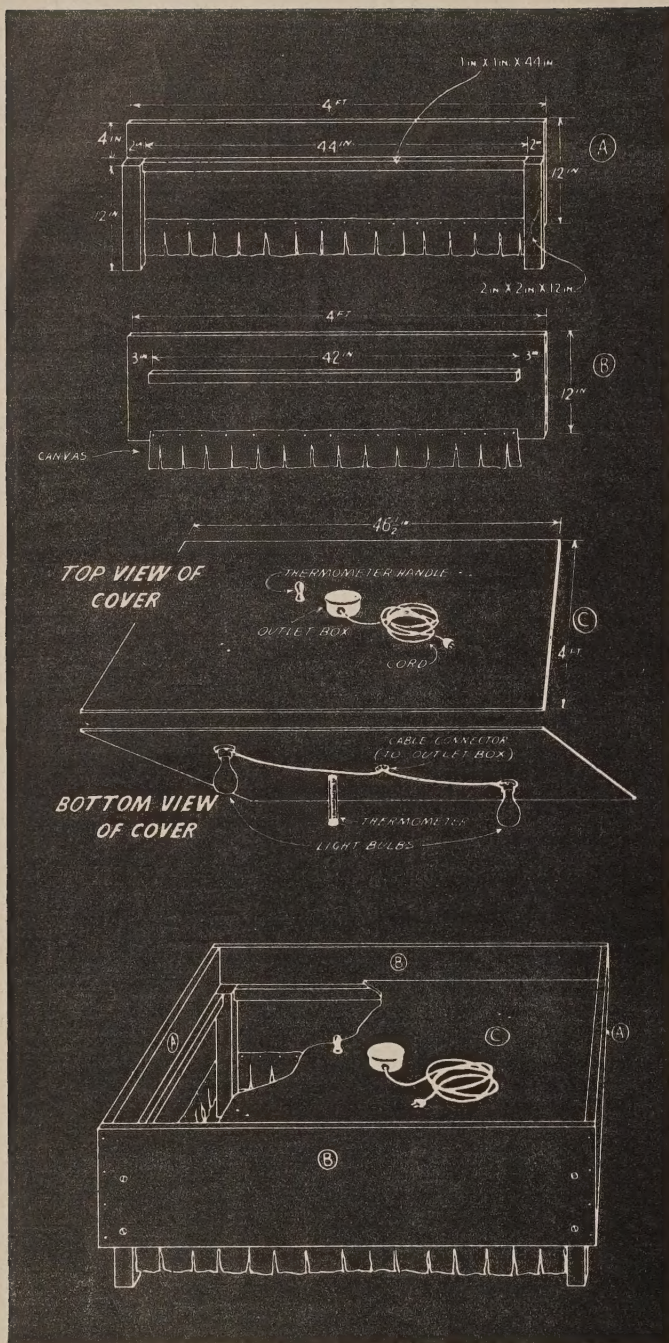
**Replaces laying hens lost in fall and winter.**

**Offers low-cost production—more cash income.**

**Rural Electrification Administration**

U. S. Department of Agriculture  
St. Louis 2, Missouri





## Assembling the Brooder

First, cut cover piece as indicated. Cut other lumber to size. Then assemble pieces as indicated in diagram. Use shingle nails, and secure with screws for additional strength. Nail support for cover along sides as indicated. Next, locate the center of the cover by drawing diagonal lines from opposite corners. Bore a  $\frac{3}{4}$ -inch hole at the center, and two  $\frac{1}{4}$ -inch holes at either side, to accommodate the outlet box. Attach the box by stove bolts. Fit one cable connector in knockout opening in bottom of outlet box. Fit the second cable connector in the sides or top of outlet box as desired.

Bore two  $\frac{1}{4}$ -inch holes to fit light receptacle openings, half way between the outlet box and the respective corners. Bolt receptacles to cover. Bore another  $\frac{3}{4}$ -inch hole at one side of outlet box to hold the thermometer.

## OBTAIN THESE MATERIALS:

Lumber	Cut to:	Use
Two pieces, 1" x 12" x 8 feet	Four pieces, 1" x 12" x 4'	Sides
One piece, 2" x 2" x 4 feet	Four pieces, 2" x 2" x 12"	Legs
One piece, 1" x 4" x 4 feet	Two pieces, 1" x 1" x 44"	Support for cover
One piece, $\frac{1}{4}$ " x 4' x 4' of plywood, wallboard, or any light, rigid and damp-proof material as available.	Two pieces, 1" x 1" x 42"	Cover
	$\frac{1}{4}$ " x 4' x 46 $\frac{1}{2}$ " (One and one-half inches off one side)	

## Electrical Supplies

One 12-foot extension cord and male plug	Hold lamps
Two porcelain lamp receptacles (covered terminal type)	Heaters
Six electric lamps (two each of 200, 150 and 100 watts—or as needed)	Hold cord fast in outlet box openings
Two one-half inch cable connectors	Protects splice in cord
One four-inch metal outlet box and top	Tape wires in outlet box
Six-inch strip of friction tape*	Tape wires in outlet box
Six-inch strip of rubber tape	

## Miscellaneous

24" x 36" strip of heavy cloth or canvas	Side canopies
Six pieces, 4" x 36" canvas	
One brooder thermometer	
$\frac{1}{4}$ lb. shingle nails	Fasten canopies to sides
1 box wood screws $\frac{1}{2}$ " No. 6	
1 box carpet tacks	
Six $\frac{1}{4}$ -inch by one-inch stove bolts and nuts (screws may be substituted)	Fasten electric fixtures to cover

\* Wire should be soldered or clamped before taping.

Attach cloth or canvas canopies, with bottom edge cut to permit small chicks to pass in and out readily.

A spool or two attached to the cover will serve as handles for raising.

When the brooder is in use, chopped hay or straw, ground-up corn cobs, cottonseed hulls or other insulating material should be piled on the cover, level with the top of the sides.

## How Much Power?

Amounts of power used to brood 250 chicks for a six-week period with this two-lamp brooder will vary according to weather conditions in various areas. The thermometer will be used to determine when bulbs of lower wattage may be substituted. A maximum power demand may be calculated as follows:

Two weeks (14 days) with two 200-watt lamps =

$$\frac{14 \times 24 \times 400}{1.000} = 134.4 \text{ kwh}$$

Two weeks with two 150-watt lamps =

$$\frac{14 \times 24 \times 300}{1.000} = 100.8 \text{ kwh}$$

Two weeks with two 100-watt lamps =

$$\frac{14 \times 24 \times 200}{1.000} = 67.2 \text{ kwh}$$

Total..... = 302.4 kwh

302.4 kilowatt hours = 1.29 kilowatt hours per chick over the six-week period.